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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,116	03/16/2004	Jefferson G. Shingleton	PWRL 1030-3	3332

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EXAMINER

MOWLA, GOLAM

ART UNIT	PAPER NUMBER
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1795

MAIL DATE	DELIVERY MODE
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12/08/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/802,116	Applicant(s) SHINGLETON, JEFFERSON G.	
	Examiner GOLAM MOWLA	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3-7 and 9-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-7 and 9-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>08/08/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's amendment of 08/08/2008 does not place the Application in condition for allowance.
2. Claims 1, 3-7 and 9-36 are currently pending. Applicant has amended claim 3, and canceled claims 2 and 8.

Status of the Rejections

3. The rejection of claims 1, 3-7 and 9-36 under 35 U.S.C. 102/103 from the office action mailed on 05/13/2008 are withdrawn in view of Applicant's argument that the references fails to teach every feature of the instant claims. However, upon further consideration, a new ground of rejection is presented below.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claims 4-7 and 9-36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4 recites the limitation "the first and second solar collector support structures" in line 10. There is insufficient antecedent basis for this limitation in the

claim. It is suggested to insert -support- in line 8 such that it reads as "comprising first solar collector support structure."

Claim Rejections - 35 USC § 103

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sharan (US 5632823).

With respect to claim 1, Sharan discloses a tracking solar collector (see fig. 1) of the type comprising a series of supports oriented on a direction (14 and 11); a torsion tube (rotatable shaft 16), having a torsion tube axis (axis through which 16 rotates), rotatably mounted to the supports (14 and 11) to permit rotation of the torsion tube (16) about the torsion tube axis; a torsion tube rotator (roller bearing 5 and 15) operably coupled to the torsion tube (16) so to rotate the torsion tube between morning, noontime and evening angular orientations; and solar panels (solar collectors which are mounted on the support 1 and 3), each having a center of gravity (inherently), the improvement comprising: mounting structure (support 1 and 3) securing the solar panels to the torsion tube (16) at an acute angle (see fig. 1) to the torsion tube axis; and each of the solar panels (solar collectors which are mounted on the support 1 and 3) being located entirely vertically above the torsion tube axis (axis of shaft 16) when the torsion tube (16) is at the noontime angular orientation.

The reference is silent as to whether the series of supports are oriented on a generally north-south axis.

It would have been obvious to one of ordinary skill in the art at the time of the invention to orient the series of supports of Sharan in north-south axis, because it is an obvious matter of a design choice to a skilled artisan, and doing so only predictable results of tracking the sun from sunrise to sunset would have been achieved, as desired by Sharan (see col. 1, lines 4-6). See *In re Kuhle*, 526 F.2d 553, 188 USPQ 7 (CCPA 1975).

With respect to claim 3, Sharan discloses a tracking solar collector (see fig. 1) of the type comprising a series of supports oriented on a direction (14 and 11); a torsion tube (rotatable shaft 16), having a torsion tube axis (axis through which 16 rotates), rotatably mounted to the supports (14 and 11) to permit rotation of the torsion tube (16) about the torsion tube axis (axis through which 16 rotates); a torsion tube rotator (roller bearing 5 and 15) operably coupled to the torsion tube (16) so to rotate the torsion tube between morning, noontime and evening angular orientations; and solar panels (solar collectors which are mounted on the support 1 and 3), each having a center of gravity (inherently), the improvement comprising: mounting structure (support 1 and 3) securing the solar panels to the torsion tube (16) at an acute angle (see fig. 1) to the torsion tube axis, the mounting structure further comprising first and second plates (23 and 27), each plate having a generally a torsion tube portion (pivot 17), located on opposite side of the torsion tube (16); an elongated solar panel portion extending at an angle from the torsion tube (16) (see fig. 1).

The reference is silent as to whether the series of supports are oriented on a generally north-south axis.

It would have been obvious to one of ordinary skill in the art at the time of the invention to orient the series of supports of Sharan in north-south axis, because it is an obvious matter of a design choice to a skilled artisan, and doing so only predictable results of tracking the sun from sunrise to sunset would have been achieved, as desired by Sharan (see col. 1, lines 4-6). See *In re Kuhle*, 526 F.2d 553, 188 USPQ 7 (CCPA 1975).

The reference is also silent as to whether torsion tube portion (15) is triangular and as to whether the solar panel portion is rectangular.

It would have been obvious to one of ordinary skill in the art at the time of the invention to select the appropriate shape of the torsion tube portion and also the solar panel portion, because doing so only predictable results of tracking the sun from sunrise to sunset would have been achieved, as desired by Sharan (see col. 1, lines 4-6). See *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966)

Allowable Subject Matter

8. Claims 4-7 and 9-36 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

9. The following is an examiner's statement of reasons for allowance: the closest prior art (Shingleton, US 6058930, as cited in previous office action) fails to disclose "the second support point of a second solar collector support structure pivotally

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connected to and supported by one of the North side supports used to support the first solar collector support structure” and it would not have been obvious to one of ordinary skill in the art at the time of the invention to have the second support point of a second solar collector support structure pivotally connected to and supported by one of the North side supports used to support the first solar collector support structure.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

Response to Arguments

10. Applicant's arguments with respect to claims 1 and 3 have been considered but are moot in view of the new ground(s) of rejection.

Applicant argues that “the Examiner has rejected claim 1 stating in part “the improvement comprising mounting structure securing the solar panels to the torsion tube at a chosen angle (20 and 45 degrees) to the torsion tube axis (Design Features p. 1539 and Figure p. 1537).” This is incorrect. The 20° angle refers to inclination of the torque tube (as shown in the figure on page 1537) and the 45° angle refers to the rotation of the torque tube about its axis as the PV panels move between east facing and west facing orientations. There is nothing in Shugar et al. suggesting that the PV panels be oriented at angle to the torsion tube. Therefore claim 1 is not anticipated by Shugar” (see Remarks, page 7).

This argument is persuasive and is moot in view of new ground of rejection as presented above.

Correspondence/Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GOLAM MOWLA whose telephone number is (571) 270-5268. The examiner can normally be reached on M-F, 0900-1700 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ALEXA NECKEL can be reached on (571) 272-1446. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/G. M./

Examiner, Art Unit 1795

/Alexa D. Neckel/

Supervisory Patent Examiner, Art Unit 1795